

## **Fostering Sustainability in the Kitchen**

A Mac-Groveland Guide to Conscious Communal Eating

This semester, I have been researching various types of foods (local, organic, etc) and preservation techniques while applying this information directly to the communal living situation at the EcoHouse. Through community efforts, we have learned a lot about eating sustainably while maintaining a modest student budget. This guide provides a general overview of strategies and resources for fostering sustainability through the creation of a food conscious community.

By consciously thinking about our food, we have started to acknowledge the food system to which we are naturally a part. Thinking about these systems, we have been able to assess the ecological and social implications of our food choices, an important step towards finding the balance that is sustainability.

One level of this system is quite personalized – our kitchen. This system has two main inputs – energy and food – and one main output – waste. By identifying the ecological and social factors that play into these inputs and outputs we have been able to assess the sustainability of the components of our own kitchen. Additionally, one of the most important parts of assessing kitchen sustainability is evaluating the human participation in the system. Community, in its **smallest sense, is the basis of a kitchen's sustainability because it is the actions of its members that determine** to what extent this small community connects with its greater human and non-human community.



Thinking about this human input, though, identifies a prevalent barrier to eating sustainably – time. **Wendell Berry, in an essay entitled “The Pleasure of Eating”, presents this barrier as a question of our current time management practices, “we hurry through our meals to go to work and hurry through our work in order to ‘recreate’ ourselves in the evenings and on weekends and vacations. And then we hurry, with the greatest possible speed and noise and violence, through our recreation — for what?”** I am convinced that eating sustainably is a lifelong learning process, due in part to the complications of reframing how human society spends time.

Other barriers also exist. Having a small food budget usually means we feel obligated to frequent large **grocery chains to find the lowest prices. In yet different cases, we may feel the sentiments: “Shopping at food co-ops is for hippies.” “Buying local and organic foods is for rich people.” “Preserving food is for old people.”** Our own stereotypes, founded in a lack of knowledge about food choices, are often the greatest barriers to sustainable behaviors.



In reframing how we spend our time and educating ourselves about the true costs and advantages of sustainable food choices, we can find a new pleasure to eating and knowing the origin of our food. Buying, preparing, and preserving food have become fun activities to do with our friends, housemates, and families. These times together also serve as great opportunities to discuss the pros and cons of different food choices, helping us figure out which type is best for our situation. Sometimes there is an extra cost to buying more ecologically friendly foods or the tools needed to preserve, but

it is important to keep in mind that there are many behavioral changes on the path to sustainability that do not cost money (for example making more home-cooked meals).

Another barrier which I have struggled with a great deal is feeling obligated to affect the total change in one season. It is important to note that change is gradual and builds upon itself. I have experienced a certain amount of guilt associated with understanding the principals of eating sustainably and failing to live up to them. I have found, though, that being patient with myself and acknowledging that any **progress is positive is a healthy way to affect a system's change.**

As a household community, we have found it very valuable to talk about food purchases and preparation. In the following sections, you will find tools that we, the EcoHouse residents, used to start these conversations, which will hopefully help you build your own sustainable kitchen!

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#### Goals of Kitchen Sustainability:

- To maximize energy efficiency in food preparation and preservation
- To maximize energy efficiency in food production and transportation
- To minimize waste going to landfill
- To maximize a sense of community on multiple scales

## **ENERGY**

An important first step in working towards kitchen sustainability for our household was to establish a sense of community within our household. Our efforts toward sustainability have been most effective when each individual feels the support of the rest of the residents. Through monitoring our household energy usage, and working as a team to reduce it, we have developed a sense of camaraderie which has given us the ability to extend our sustainability efforts to other aspects of our living situation.

Energy is a very important input of our kitchen systems, yet the current sources of this energy are fossil fuels, a limited resource. Incorporating more sustainable cooking behaviors into our community has been a very effective way to reduce energy consumption in the kitchen without costing extra money. When we took on some of these behaviors as a community, the change became more manageable as we were able to remind each other and work together to make change.



There are several things to keep in mind while reading the following sections on kitchen appliances. One is that generally, using a gas appliance is more efficient than an electric one. Fossil fuels are converted to electricity at power plants before the electricity can be transmitted to homes (unless the electricity supplier uses alternative energy sources), whereas the fuel for gas appliances is delivered directly to houses, using less energy. Another thing to think about is that appliances that minimize the area that needs to be heated are most efficient. For example, using a toaster oven to warm a small portion of food is more efficient than heating up the entire oven to warm the same portion. Another element to balance, though, is that some of the most efficient appliances negatively affect food quality (**such as microwaves**). **There is no “right” way: sustainable kitchen behaviors are a balance between available appliances, energy efficiency, and food quality.**

The information about appliances has been adapted from two online guides to home energy efficiency. For more information please visit the following websites:

<http://www.aceee.org/consumerguide/cooking.htm#tips>

[https://www.rmi.org/images/PDFs/HEBs/E04-18\\_HEB8\\_KitchenApps.pdf](https://www.rmi.org/images/PDFs/HEBs/E04-18_HEB8_KitchenApps.pdf)

### **Stovetops**



- **Cover pots with lids to prevent heat from escaping.**
- **Use the smallest pan and burner possible.**
- Match the pan size to the element size. On gas stovetops, set the flame so that it is smaller than the bottom of the pan, and on electric stovetops, use a burner that is the same size as the pan.
- Use high-conductivity materials so that food cooks faster and more evenly (ex. copper-bottom pans heat up faster than regular pans).
- When boiling, use as little water as needed.
- **On electric stovetops, use only flat-bottomed pots and pans that make full contact with the element. A warped or rounded pot will waste most of the heat. Gas stovetops heat rounded pots more efficiently.**
- **Keep the stovetop clean. On electric stovetops, the shinier the element is, the more heat it will reflect up to the pan.**

### **Ovens**

Conventional ovens are rather inefficient because before heating the food, they must first use energy to **heat up the oven itself, all of the steel and air inside.** According to the Rocky Mountain Institute, “tests indicate that only about 6 percent of the energy output of a typical oven is actually absorbed by the **food.**” The best behavior we have started practicing when it comes to ovens is to use it only when we are

cooking large dishes or batches, reheating leftovers in more efficient, smaller appliances. Using the oven less is especially important in summer, when the air-conditioning might also be running.

- **Cook several dishes at one time or cook larger portions to reheat at another time.**
- **Bake with ceramic or glass pots and pans to increase conductivity.**
- **Use thermometers or timers to avoid overcooking.**
- **Leave oven racks free of coverings such as foil to allow heat flow.**
- Keep preheating to a minimum.
- **Turn off the oven a few minutes before food is ready; the oven will remain hot enough to finish cooking.**
- **Clean self-cleaning ovens after baking something, so that it does not have to preheat a second time.**
- **Use the oven light to check on a dish in the oven, rather than opening the door.**
- **Unplug the oven when not using to save the energy that would go into running the clock.**

## Microwave Ovens

Microwaves are unique in that they heat food directly by exciting water and fat molecules in food. Although this process takes a lot of energy, it also takes much less time than it does to preheat an oven, so cooking time is greatly reduced. Microwave ovens, therefore, are a more efficient choice than conventional ovens.

- **Keep inside surfaces clean so the microwave radiation can penetrate food effectively.**
- **Defrost food in the refrigerator or at room temperature, rather than using a microwave.**
- **Make homemade meals and if need be reheat in microwave, rather than heating pre-packaged microwavable meals, which have a higher overall energy cost due to processing, precooking, packaging, and transportation.**
- **Unplug after using to save the energy that would go into running the clock.**

## Refrigerator

- **Keep the door closed as much as possible.**
- **Keep the fridge in a place where it is not in direct sunlight or next to a heat source such as the oven or the dishwasher.**



- **Leave space** between the back of the fridge and the wall/cabinets to allow air circulation around condenser coils.
- **Keep the fridge top uncluttered** to allow air circulation.
- **Use a thermometer to check the temperature of the fridge. Keep the main compartment temperature between 36°F and 40°F and the freezer temperature between 0°F and 5°F.**
- **Clean condenser coils at least once a year** by unplugging the fridge and brushing off or vacuuming the condenser coils (located on the back of the refrigerator or behind the front grill).
- **Keep door seals or gaskets clean and in good condition. They should be able to hold a piece of paper in place** when the door is closed.
- **Defrost the fridge/freezer regularly** to prevent buildup of ice on the coils, which makes the compressor run longer, wasting energy.
- **Make sure the fridge/freezer remains full at all times. We have found that our fridge is too big for us, so we do not have enough food to fill it. Instead, we fill containers with water and leave them in the fridge, which retain the cold much better than empty space** reducing the need to run the compressor.
- **Defrost frozen food in the fridge. The frozen food will help cool the fridge.**
- **Let hot foods cool to room temperature before putting them in the fridge, to prevent the fridge from having to work harder to bring the temperature down.**

## Dishwashers

- Use a dishwasher whenever possible instead of hand washing.
- Scrape dishes before putting them in the dishwasher instead of rinsing them (if rinsing is necessary, use cold water).
- Fill the racks to optimize the water and energy use; this may require looking at the manual.
- Only wash full loads.
- When available, use energy-saving cycle options.
- Turn down the water heater thermostat to 120°F as most dishwashers have built-in heaters to boost water temperature to 140–145°F, the temperature manufacturers recommend for optimum performance.



## Small Appliances

Small appliances are often times more efficient at cooking certain foods because they are more specialized than the oven or stovetop. For example, rice cookers are more efficient at cooking rice than on the stove, crockpots are very efficient for cooking soups and stews, electric kettles generally use about one-third less energy to boil water than a regular kettle on a stovetop, and toaster ovens use only one-third to one-half the energy of conventional electric ovens when heating small dishes. The important thing to remember when it comes to small appliances is to either unplug them when they are not in use, or plug them all into a power strip that can be turned off when not in use.

### Resources:

Home Energy Calculations: <http://www.recinfocenter.com/aspx/News.aspx?NewsID=970>

# FOOD

*“But we have neglected to understand that we cannot be free if our food and its sources are controlled by someone else. The condition of the passive consumer of food is not a democratic condition. One reason to eat responsibly is to live free.” –from Wendell Berry’s “The Pleasure of Eating”*

What does it mean to eat responsibly? How do we take control of our own food and its sources? Two main ways of controlling this kitchen input is through purchases and preservation. In the case of food purchases, we have compared whole, organic, and local foods, which have given us the tools to make informed decisions for our community.

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## Food Purchases

### Whole Foods

Buying ingredients, specifically whole foods in bulk, rather than processed and packaged foods has been an essential part of our efforts toward creating a sustainable kitchen. This has a direct connection to the amount of waste that we create and the amount of time that we spend preparing food. Despite the obvious waste reducing qualities of buying whole foods, it also requires more time to prepare meals, an **unattractive prospect in today’s society, yet one of the most important aspects of eating sustainably.** We have found that preparing food from whole foods on weekends before a busy week is a great way to have fun, and avoid having to buy packaged foods when we are in a hurry.

### Buying Bulk:

- Buying bulk is a fun experience that minimizes the amount of packaging involved in purchasing food, which reduces an important output of our kitchen system - waste. Reducing packaging not only reduces waste for the sake of reducing waste, it also reduces the price that we pay for food, since fewer dollars are put into the part of the product that we do not eat. Also, we can buy any bulk item in whatever quantity that we want or need, keeping the food that we buy fresh. Although many stores provide bags for customers to fill, most encourage people to bring their own containers – and why not – it makes the process ever more advantageous to everyone involved! Before filling containers, we first tare them – using the scale that the store provides, we weigh our empty container and mark this weight somewhere on the container. Then, we write down the product number on this same label. The cashier weighs the filled container and subtracts the tare weight.



### Shopping at a Cooperative:

- Background: In brief, a food cooperative is a worker or customer owned business that provides high quality food to its members. This cooperative often provides members with benefits like control over what the store sells, special member sales, and also consumer education. For more information about coops, please visit the following website: <http://www.localharvest.org/food-coops/>
- Membership: At most coops, you do not have to be a member to shop at the store. There are lots of advantages, though, to being a member and usually little cost involved depending on the coop. At our local coop, Mississippi Market, for example, it cost ninety dollars to buy into the coop, and now we receive coupons and various member advantages. At any time that we want to buy out of the company, for example if we move, we can get our money back.
- Special Orders: Being able to place special orders is an additional advantage of being a coop member because of the convenience and cost savings. When buying a staple food that our household uses a lot of (ex. oats or flour), it can be more convenient to pick up one big load rather than taking multiple trips. Also, we have been able to cut down on the costs of food purchases by placing special orders when a product is on sale or by buying a product that is less expensive when purchased in larger quantities.

### Resources

A directory of Minnesota Cooperatives:

<http://www.coopdirectory.org/directory.htm#Minnesota>

A searchable directory and map of Farms and Markets around the Twin Cities:

<http://www.mda.state.mn.us/food/minnesotagrown/directory.htm>

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## Local Foods

Local foods are those that are bought and sold within the same area that they are grown. This area can be restricted by a certain number of miles or states, or more individually by the radius to which a farmer can distribute his food in one day.

Eating local is a great way to bridge the divide between ourselves and our food that has largely been created by the industrialization of food. In the process of eating more local foods, we are creating a sustainable connection between our household community and our regional community. Although experts disagree over whether or not it is economically viable or even simply possible for everyone to eat only local foods, including some local foods in our diet does allow us to make individual connections with growers, allowing easy access to information about food production. Fostering a food conscious society is best done one step at a time, and a great way to do this is by purchasing local foods when they are available.



### Why eat local

- Flavor and Freshness: When buying from a local farmer, products are less likely to be mass marketed, so farmers can offer consumers more choices. Also with less travel time, fruits and veggies can ripen on the plant longer, which means food is more flavorful and fresh.
- Support for Local Farms: By buying locally, we keep money in our community. A startling statistic is that “on average, farms receive only 19 cents of every consumer food dollar for their work. The remaining 81 cents goes to packaging, transportation, processing, wholesaling and food preparation.”<sup>1</sup>
- Healthier: When we have direct contact with famers, we can find out their policy on pesticide and hormone use, which gives us the power to make choices to buy healthier food.
- **Less Pollution: The average American dinner travels 1500 miles.** “And for every food calorie consumed, nine calories of energy are expended.”<sup>2</sup> Buying local generally requires less fossil fuel consumption, which reduces air pollution.
- Fostering Community: Knowing the farmer that grows our food is a great way to form relationships with neighbors and build community.
- Building Ecological Connections<sup>3</sup>: Buying more local foods has allowed us to learn a lot about the seasonal availability of produce, which has allowed us to become more ecological citizens.

#### Local: By the Numbers

- Days in which local food sits in co-op storage.....**1-2**
- Days in which “non-local” food usually sits in transport before reaching a typical grocery store.**7-14**
- Hours after being harvested that local produce reaches co-ops .....**12-24**
- Percent increase in the distance that food traveled between 1981 and 1998 in the U.S. ....**20**
- Percent of fruit shipped in from overseas .....**40**
- Average number of miles that local food travels before reaching you..... **44**
- Percent of nutrients lost 6-10 days after harvesting many fruits and veggies..... **50-60**
- Percent of dollars spent locally that tend to remain in the local economy.....**70**
- Thousands of gallons in fuel saved annually when food is shipped and bought locally .....**280-346**
- The average number of miles that food travels before reaching you .....**1,494**
- The aggregate local food sales among Twin Cities co-ops last year .....**\$16,750,000**

Data from the National Cooperative Grocers Association.

<http://justfood.coop/wp-content/uploads/2007/07/compost-aug07.pdf>

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<sup>1</sup> [http://www.landstewardshipproject.org/pdf/local\\_food.pdf](http://www.landstewardshipproject.org/pdf/local_food.pdf)

<sup>2</sup> Same as 1



### **Farmer's Markets**

One of the easiest and most rewarding ways for us to buy local has been to shop at a local farmer's market. Buying directly from the farmer who grows our food is a great experience, especially since the food they sell is as local as most city dwellers are going to find.

One thing we have figured out, though, is that there is not necessarily a standard for how "local" the products sold at any given market need to be. For example, at the Minneapolis Farmer's Market, artisans sell everything from local apples to imported bananas. It is important to have conversations with artisans to find out where their products come from and how they are grown.

The closest Market to our neighborhood is the Saint Paul Farmers' Market. Unlike the Minneapolis Farmers' Market, everything at the St. Paul Market is produced locally, most coming from not more than 50 miles away, and no middlemen are allowed – the person selling us the food has had some direct involvement in the production of it. The closest locations to our neighborhood with afternoon and weekend hours are the following:

#### **St. Thomas (Formerly St. Luke's)**

At St. Thomas More Church  
on the corner of Summit and Lexington  
Friday afternoons – early May through  
the end of October

Downtown St. Paul  
290 East 5<sup>th</sup> Street (Corner of 5<sup>th</sup> and Wall Streets)  
Summer Hours (end of April – mid-November):  
Saturdays 6am-1pm and Sundays 8am-1pm  
Winter Hours: Saturdays 9am-noon



For more details regarding the St. Paul Farmer's Market please refer to the following website:  
<http://www.stpaulfarmersmarket.com/>

### **Community Supported Agriculture (CSA)**

Another great way to connect with a farmer and extend the household community is by subscribing to a community supported agriculture (CSA). When a person subscribes to a CSA, he pays a yearly fee to a farm and receives a weekly or monthly basket of farm products (such as produce, eggs, milk, meat, flowers, honey, etc) during the growing season. Paying this fee makes his household members of the CSA.

To find a CSA near you: <http://www.localharvest.org/csa/>

For more information on CSA's: <http://www.localharvest.org/csa.jsp>

### **Neighborhood Stores**

#### **Mississippi Market Co-op**

1810 Randolph Avenue

St. Paul, MN 55105

Open Daily 8:30-9

Phone: (651) 690-0507

[info@msmarket.coop](mailto:info@msmarket.coop)

<http://www.msmarket.coop>

#### **Hampden Park Co-op**

928 Raymond Avenue

St. Paul, MN 55114

Open M-F 9-9, Sat 9-7, Sun 10-7

Phone: 651-646-6686

<http://www.hampdenparkcoop.com>

#### **Kowalski's**

1261 Grand Avenue

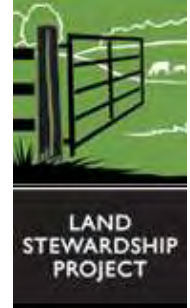
St. Paul, MN 55105

Open 6:00am - midnight

Phone: (651) 698-3366

## Resources

UK Report, Fossil Fuel Use in Food Transportation: [http://www.sustainweb.org/pdf/eatoil\\_summary.PDF](http://www.sustainweb.org/pdf/eatoil_summary.PDF)  
 The Land Stewardship Project – Local Food: [http://www.landstewardshipproject.org/pdf/local\\_food.pdf](http://www.landstewardshipproject.org/pdf/local_food.pdf)  
 The Land Stewardship Project – Main: <http://www.landstewardshipproject.org/foodfarm-main.html>  
 Pride of the Prairie: <http://www.prideoftheprairie.org/potp-old/seasonalfoodguide.htm>  
 Minnesota Department of Agriculture:  
<http://www.mda.state.mn.us/news/publications/food/minnesotagrown/producecalendar.pdf>  
 Traditional Foods Minnesota:  
<http://web.me.com/willwinter/traditionalfoodsmn.mac.com/Welcome.html>  
 Food Alliance: [www.foodalliance.org](http://www.foodalliance.org)  
 Renewing the Countryside: [www.renewingthecountryside.org](http://www.renewingthecountryside.org)  
 The Minnesota Project: [www.mnproject.org](http://www.mnproject.org)  
 Sysco Minnesota – Food Service Products: [www.syscomn.com](http://www.syscomn.com)  
 Minnesota Cooks: [www.minnesotacooks.org](http://www.minnesotacooks.org)  
 Food Routes: [www.foodroutes.org](http://www.foodroutes.org)  
 Whole Farm Coop (local drop site is Unity Unitarian Church): [www.wholefarmcoop.com](http://www.wholefarmcoop.com)  
 Heartland Food Network: <http://www.heartlandfoodnetwork.org>  
 Minnesota Home Grown: <http://mnhomegrown.org/node/12>  
 Sustainable Farming Association of Minnesota: <http://www.sfa-mn.org/links.php>  
 Do It Green – Eat Local: <http://www.doitgreen.org/article/food/eatlocal>  
 Edible Twin Cities: <http://www.edibletwincities.net/pages/eatlocal.htm>



## Organic Foods

Organic foods are foods that have been grown without synthetic chemicals. As with local foods, there are varying degrees of organic foods. These range from processed foods, that contain a certain percentage of organic ingredients, to a 100% organically grown vegetable. Sorting out the pros and cons of organic foods can be difficult and overwhelming, but the following summary and resources should help you evaluate the importance of purchasing organic foods for your household.

### What it Means to be Organic

The Organic Food Productions Act of 1990 is the ground work for the National Organic Program through which the United States Department of Agriculture (USDA) grants certification to qualified foods. Some general premises of organic food include the following: (adapted from the following sites:

Animals: In order for a product to be considered organic, no animal from which the product is made (except dairy cows before they are sent to organic farms) “can be given antibiotics, growth hormones, or feed made from animal byproducts, which can transmit mad cow disease.” Another significant aspect is that “organically raised animals must also have access to the outdoors, though it might simply mean that cattle are cooped up in outdoor pens.”<sup>4</sup>

Plants: No synthetic chemicals can be used in the farming of organic fruits and vegetables.

Conventional Farmers	Organic Farmers
Apply chemical fertilizers to promote plant growth.	Apply natural fertilizers such as manure or compost to feed soil and plants.
Spray insecticides to reduce pests and disease.	Use beneficial insects and birds, mating disruption or traps to reduce pests and disease.
Use chemical herbicides to manage weeds.	Rotate crops, till, hand weed or mulch to manage weeds.
Give animals antibiotics, growth hormones and medications to prevent disease and spur growth	Give animals organic feed and allow them access to the outdoors. Use preventative measures – such as rotational grazing, a balanced diet and clean housing to help minimize disease

Table Information from: <http://www.mayoclinic.com/health/organic-food/NU00255>

<sup>4</sup><http://www.consumerreports.org/cro/food/diet-nutrition/organic-products/organic-products-206/overview/>



## The Issues

(Compiled from the following sources: <http://www.consumerreports.org/cro/food/diet-nutrition/organic-products/organic-products-206/overview/> and <http://www.mayoclinic.com/health/organic-food/NU00255>)

### • Health

- Consumer: The major difference between conventional farming practices and organic ones (as evidenced by the previous table) is the lack of synthetic chemicals in organic practices. Residue from these chemicals can be found on the produce of conventional farms. Some people buy organic products to limit their exposure to chemicals such as pesticides. Experts do not agree on the amount of health risk associated with this exposure.
- Farmer: As farmers are directly working with the pesticide and herbicide application, the health risks are greater for them. **According to a National Cancer Institute study, “farmers exposed to herbicides had a cancer risk six times greater than non-farmers”.** Conventional farming in developing nations also poses health issues since pesticide use is often poorly regulated.

### • Environment

- Water pollution is a major problem with conventional farming as the chemicals that farmers put on their fields often run off into local bodies of water. Chemicals like pesticides, once in the water, kill many **plants and animals creating “dead zones”** of low productivity. Conversely, when fertilizers such as nitrogen run off agricultural lands eutrofication occurs in the ecosystem, which means, the productivity of some plants increases, while that of others decreases. Both types of runoff result in an imbalance of ecosystems.
- Soil erosion is a major problem with farming, especially today in the US. Some types of organic food **production help reduce soil erosion, primarily by looking at soil as “the foundation of the food chain”,** thereby recognizing its importance in the food production system and taking more care for its health. Soil erosion does still occur, though, on many big, industrial organic farms that practice monocropping.

### • Appearance

1. Because of the difference in how organic food is grown and processed, it is often lacking the preservatives of conventionally grown food. Consequently, organic foods may spoil faster and/or may not be uniformly shaped and colored.
2. There is currently no standard to ensure that there is any difference in nutritional values between organic and conventionally grown food.

### • Cost

- A major concern with buying organic is that it costs more. When considering the true cost of food production, though, many find that organic foods are no more expensive than conventional. The problem is that, due to some of the following reasons, many of the costs of conventional foods are born by the government, affecting consumers in a more tangential way. The following reasons for higher costs of organic foods are from [www.organic.org](http://www.organic.org):
  - **Organic farmers don’t receive federal subsidies like conventional farmers do. Therefore, the price of organic food reflects the true cost of growing.**
  - The price of conventional food does not reflect the cost of environmental cleanups that we pay for through our tax dollars.
  - Organic farming is more labor and management intensive.
  - Organic farms are usually smaller than conventional farms and so do not benefit from the economies of scale that larger growers get.

**Organic Money Saving Tips** Source: Organic.org

Making the effort to buy organic products is a healthy choice, but it can have an undeniable impact on our budgets. To save you time, energy, and money, we offer the following tips for buying organic on a budget.

**Comparison Shop.** You may be able to find less-expensive alternatives at different stores. Many major chains are coming out with their own organic brands, such as **O Organics™ at Safeway and ShopRite Organics at ShopRite.**

**Cook More.** The more convenient the food is, the more expensive it is. For example, buying an organic frozen dinner may save you time in the same way a conventional frozen dinner would, but it costs quite a bit more than its nonorganic counterpart and much more than a homemade meal. Buy organic items that are lower in price (such as produce), and make your own dishes from scratch.

**Stock Up.** Stock up on your favorite items when they go on sale. Or try something new that is on sale or is priced well, and you may find a new favorite!

**Buy in Bulk.** Buying in bulk will keep costs down. Look for many pantry staples often available in bulk, such as beans, legumes, rice, flour, nuts, chocolate chips, and much more. Many local co-ops have extensive organic bulk sections.

**Organic Coupons.** Keep an eye out in the Sunday paper and grocery circulars for coupons and, again, stock up to take best advantage of the savings!

**Shop in Season.** Shop farm stands and farmers' markets for the freshest, most-delicious produce while supporting local farmers. Purchasing in season produce from your grocer may also keep costs down.

**Be Selective.** Decide to only purchase organic milk and produce. See the Environmental Working Group's "dirty dozen" for the most-contaminated produce and tailor your decisions based on these.

**Eat With Friends.** Last but not least, make it fun! Choose some like-minded friends and get together to each prepare an organic dish—a great way to add variety to your organic diet while keeping your own purchases down. Get together for a weekend potluck—or, during the week, arrange a food swap to minimize cooking and maximize eating organically.

## Neighborhood Businesses

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### Hampden Park Co-op

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St. Paul, MN 55105

Open 24 Hours

Phone: (651) 698-3366



## Resources:

The USDA Standards for Organic foods:

<http://www.ams.usda.gov/AMSV1.0/ams.fetchTemplateData.do?template=TemplateA&navID=NationalOrganicProgram&leftNav=NationalOrganicProgram&page=NOPNationalOrganicProgramHome&acct=nop>

Organic Consumer Association: <http://www.organicconsumers.org/>

The Organic Alliance: <http://www.organic.org/>

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## Growing Your Own

We have also found that a great way to reconnect our community to its food source is by growing our own food. Living in the city makes this seem **slightly more complicated, but really, it's just more of an adventure!**

Removing lawn to make a vegetable garden is very easy and rewarding. If you have never gardened before, this is a great time to start – just remember that it may take a few seasons to get your garden producing the amount or quality of yummy veggies that you want, so be patient and let yourself make some mistakes along the way. If you have questions about gardening or are looking for a place to start, a great resource is the University of Minnesota Extension.

For some, the cost of starting a garden (ex. tools, seeds, time, etc) seems to outweigh the benefits. Something to keep in mind, though, is the amount of time and money savings that go along with reducing the amount of lawn care. Also, if you plant native/heirloom varieties of veggies, you may find yourself using significantly less water than required to maintain green turf grass.



### Cold Frames

One way to extend the growing season is to buy or make a cold frame. These are used to grow plants in spring or fall when overnight frosts and cold day-time temperatures would otherwise kill your plants. Although they come in many shapes and sizes, the type that we are experimenting with at the EcoHouse is a portable homemade cold frame. The plans for this cold frame, and more information on cold frames, can be found at the following website:

<http://www.gardengatemagazine.com/main/pdf/coldfram.pdf>

### Community Gardens

Even though we have a yard, many of our friends who live in dorms and apartments do not, and others either do not have the time or do not know much about gardening. Starting community gardens is a great way to connect with neighbors and have homegrown food. Although large scale community gardens are usually the first to come to mind (ex. registered projects such as MULCH at Macalester or one of the 75 other registered community gardens in St. Paul) these are not the only models for community gardening. Community gardening can be as small scale as talking to your neighbor and sharing a plot in one of your yards, or working with your apartment management to develop containers for a few shared plants. For more information about community gardening and how to get connected with existing gardens and resources, Garden Matters is a great community organization that is committed to supporting community gardens.



### Herb Gardens and Sprouters

Another attempt we have made at growing our own is with small pots of herbs and bean sprouts. A sprouter is easy to make, simply find a jar, put whole in the lid and you are all set. Put any type of bean in it, soak them in water for 24 hours and then drain, rinsing the beans every day until they have sprouted. Serve on salads or in various dishes for a bit of fresh greenery in the winter!

### Resources

University of Minnesota Extension: <http://www.extension.umn.edu/gardeninfo/>

Information on urban gardening and its historical roots: <http://www.revivevictorygarden.org/FoodMiles.html>

Garden Matters: [http://www.gardenworksmn.org/index\\_2.htm](http://www.gardenworksmn.org/index_2.htm)

Community Garden Start Up Guide: <http://www.gardenworksmn.org/Resources/StartupBasics.pdf>

City of St. Paul Community Gardening Page: <http://www.stpaul.gov/index.asp?NID=1060>

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## Concluding thoughts about Food Purchases

I recently read a Time magazine article in which the author went on a search to find out the best food to eat. He expressed the following as the conclusion of his research:

**“But when it comes to my basic ingredients--literally, my "whole" foods rather than my convenience foods--I would still rather know the person who collects my eggs or grows my lettuce or picks my apples than buy 100% organic eggs or lettuce or apples from an anonymous megafarm at the supermarket. Choosing local when I can makes me feel more rooted, and (in part because of that feeling, no doubt) local food tastes better.”<sup>5</sup>**

I have come to a similar conclusion myself and will continue to work towards making the food purchases of my kitchen more sustainable. I hope that after reading through this section of the guide and starting to think about your food purchases, you will weigh the true cost and benefits of the food **you bring into your kitchen and build your “community” in the process.**

Interesting articles about how to decide what to eat:

<http://gristmill.grist.org/story/2008/10/16/84859/767>

<http://www.conservationmagazine.org/articles/v9n3/the-problem-of-what-to-eat/>



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<sup>5</sup> Cloud, John. “Eating Better Than Organic”. <http://www.time.com/time/magazine/article/0,9171,1595245-5,00.html>

## Food Preservation

An essential part of eating local produce year round in a temperate climate such as **Minnesota's** is preserving foods while they are in season. In order to avoid negating the energy savings of eating locally, though, it is important to compare the energy efficiencies of different methods of food preservation. Although it is virtually impossible to come up with a definite answer of which method is most efficient, the following research and calculations should provide a basis from which the members of your community can adapt to fit their unique lifestyles.

<b>Freezing</b>	<b>Dehydrating</b>	<b>Canning</b>	<b>Cold Storage</b>
<p>Pros:</p> <ul style="list-style-type: none"> <li>▪ Takes little advanced knowledge/training</li> <li>▪ Can preserve bulk readymade meals</li> <li>▪ Maintains more nutritional value than canning<sup>1</sup></li> </ul> <p>Cons:</p> <ul style="list-style-type: none"> <li>▪ On average uses more energy than dehydrating and canning<sup>2</sup></li> <li>▪ Freezer takes up a considerable amount of space</li> <li>▪ Food lasts least amount of time compared to dehydrating or canning</li> <li>▪ Packaging material is not as environmentally friendly (mostly plastic) as other methods</li> </ul> <p>Suggested Use:</p> <ul style="list-style-type: none"> <li>▪ Vegetables</li> <li>▪ Pre-made meals</li> </ul> <p>Resource: National Center for Food Preservation – How to Freeze<sup>3</sup></p>	<p>Pros:</p> <ul style="list-style-type: none"> <li>▪ Takes little advanced knowledge/training</li> <li>▪ Can dehydrate foods that are not high enough quality to freeze or can</li> <li>▪ On average uses less energy to preserve the same amount of food as a freezer<sup>2</sup></li> <li>▪ Food, once preserved, is easier to transport from one place to another compared to other methods</li> <li>▪ Wide variety of uses once dehydrated (reconstitute, snacks, ingredients)</li> </ul> <p>Cons:</p> <ul style="list-style-type: none"> <li>▪ Only feasible for certain foods</li> <li>▪ Takes longer to preserve than canning, freezing, or cold storing</li> </ul> <p>Suggested Use:</p> <ul style="list-style-type: none"> <li>▪ Fruit and veggies</li> <li>▪ To make snacks</li> <li>▪ Meat products (jerky)</li> </ul> <p>Resource: National Center for Food Preservation – How to Dry<sup>4</sup></p>	<p>Pros:</p> <ul style="list-style-type: none"> <li>▪ Once in jars, the food will last for many years.</li> <li>▪ Can make recipes rather than single ingredient foods like dehydrating and cold storage</li> </ul> <p>Cons:</p> <ul style="list-style-type: none"> <li>▪ Requires self-education or training to carry out in a safe manner</li> <li>▪ Only feasible for certain foods</li> <li>▪ Lose some nutrient value in the process</li> <li>▪ Requires equipment investment</li> </ul> <p>Suggested Use:</p> <ul style="list-style-type: none"> <li>▪ Jams, jellies, sauces, fruits</li> </ul> <p>Resource: Principles of Home Canning Guide<sup>5</sup></p>	<p>Pros:</p> <ul style="list-style-type: none"> <li>▪ Takes little advanced knowledge/training</li> <li>▪ Convenient</li> <li>▪ Lowest energy use of all methods</li> <li>▪ Little to no equipment investment</li> </ul> <p>Cons:</p> <ul style="list-style-type: none"> <li>▪ Only feasible for certain foods</li> <li>▪ Either need to already have a cold, dark, low humidity place or need to build one</li> </ul> <p>Suggested Use:</p> <ul style="list-style-type: none"> <li>▪ Root vegetables</li> <li>▪ Pumpkin</li> <li>▪ Squash</li> </ul> <p>Resource: Storing Vegetables at Home<sup>6</sup></p>

<sup>1</sup> Pollan, M. (2008). *In defense of food: An eater's manifesto*. New York: Penguin Press. Page 168

<sup>2</sup> Based on general energy calculations by student

<sup>3</sup> <http://www.uga.edu/nchfp/how/freeze.html>

<sup>4</sup> <http://www.uga.edu/nchfp/how/dry.html>

<sup>5</sup> [http://www.uga.edu/nchfp/publications/usda/utah\\_can\\_guide\\_01.pdf](http://www.uga.edu/nchfp/publications/usda/utah_can_guide_01.pdf)

<sup>6</sup> [http://www.uga.edu/nchfp/how/store/wisc\\_vegetables.pdf](http://www.uga.edu/nchfp/how/store/wisc_vegetables.pdf)

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## WASTE

*“Much of the litter that now defaces our country is fairly directly caused by the massive secession or exclusion of most of our people from active participation in the food economy. We have made a social ideal of minimal involvement in the growing and cooking of food. This is one of the dearest ‘liberations’ of our affluence. Nevertheless, the more dependent we become on the industries of eating and drinking, the more waste we are going to produce.” –from Wendell Berry’s “Waste”*

In the previous sections I have addressed methods of food purchasing and preservation that help reduce waste. Making this shift to buying less prepackaged food, though, is a slow process and in the meantime, we must address the growing waste that a community produces in its kitchen. There are many ways to dispose of kitchen waste, some of which involve connecting with the non-human community through the disposal of organic waste. Whether you compost or have worms, you are closing the loop of your kitchen system, creating soil from your waste that can be used to grow more food.

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## Composting

Composting is an excellent, easy way to speed up decomposition rates of organic material. By mixing food scraps and yard waste in a bin, you can create healthy soil for your lawn or garden needs and reduce the amount of waste going to landfills. There is no preclusion to composting in the winter in our Midwestern climate. There are many types of containers and methods that you can use to compost, so deciding which one works best for your household will take looking over the following resources and having discussions as a community.



### Resources:

Complete Guide to Composting From University of Minnesota Extension:

<http://www.extension.umn.edu/distribution/horticulture/DG326.html>

Composting Basics Brochure:

<http://cwmi.css.cornell.edu/compostbrochure.pdf>

Winter Composting:

<http://counties.cce.cornell.edu/tompkins/compost/Winter%20Composting.pdf>

Composting Inside:

<http://counties.cce.cornell.edu/tompkins/compost/Stealth%20Composting.pdf>

Page of links to composting fact sheets:

<http://counties.cce.cornell.edu/tompkins/compost/downloads.htm>

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## Vermaculture

Another way to reduce landfill waste and create nutrient rich soil is to compost using worms. Vermaculture or vermicomposting involves bringing worms into your household community and caring for them so that they will increase the decomposition rates of your food scraps. The following online brochure and book give an excellent description of the method and how to bring worms into your own kitchen community.

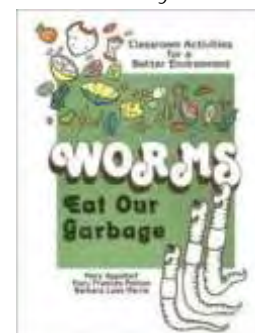
### Resources:

Brochure on Vermicomposting:

<http://counties.cce.cornell.edu/tompkins/compost/VermiBrochure.pdf>

Book about Vermaculture:

Appelhof, M. 1997. *Worms Eat My Garbage: How to Set Up and Maintain a Worm Composting System* (2<sup>nd</sup> Edition). 176 pp





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## Recycling

After sorting out your organic waste, the next step is to sort out reusable and recyclable containers. Many plastic containers (ex. from yogurt) and bags (ex. from bread) can be used a second time (ex. for leftovers). For packaging and containers that cannot be used a second time, consider if the objects can be recycled.

In the Mac-Groveland neighborhood, Eureka recycling picks up recyclables and has a lot of information about how to recycle on their webpage. The following is a list from that site of materials that can and cannot be recycled.

DO Recycle	DON'T Recycle
All metal food and drink cans. Labels are okay. All metal can lids, jar lids and bottle caps. All aluminum foil & trays.  and  plastic bottles with a neck only.	Aerosol cans Scrap metal Window glass Glass dishes or glasses Broken glass Pyrex glass Light bulbs Ceramic dishes Yogurt or margarine tubs Plastic bags Plastic bottles used to dispose of needles

### Resources:

Eureka Recycling: [http://www.eurekarecycling.org/rec\\_curbside.cfm](http://www.eurekarecycling.org/rec_curbside.cfm)

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## Trash

Hopefully as your community starts to compost, connect with its non-human environment, and recycle, it will reduce the amount of trash going to the landfill. It will definitely take time to reduce this output since it is so connected to everything else in the kitchen community from human behaviors, to food purchases. Every little bit of waste reduction helps, though, so now is the time to start building a sustainable community around your kitchen!

